

THE OFFICE OF REGULATORY STAFF
REVISED DIRECT TESTIMONY AND EXHIBITS
OF
LEIGH C. FORD

MAY 24, 2012



DOCKET NO. 2012-1-E

**ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS
OF CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.**

REVISED DIRECT TESTIMONY OF

LEIGH C. FORD

ON BEHALF OF

THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF

DOCKET NO. 2012-1-E

IN RE: ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF

CAROLINA POWER AND LIGHT COMPANY

d/b/a PROGRESS ENERGY CAROLINAS, INC.

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Leigh Ford. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as a Senior Electric Utilities Specialist in the Electric Department for the Office of Regulatory Staff ("ORS").

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I earned a Bachelor of Arts degree from Lenoir-Rhyne University in 2002. Prior to my employment with ORS, I was a Field Service Representative with the South Carolina Budget and Control Board. I joined ORS in November 2007 as an Electric Utilities Specialist and was promoted to Senior Electric Utilities Specialist in May 2010. I have testified before this Commission in fuel and general rate proceedings. I also presented an allowable ex-parte briefing regarding renewable resources and their role in South Carolina's electric generation portfolio.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to set forth ORS Electric Department's findings and recommendations resulting from its review of Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.'s ("PEC" or "Company") fuel expenses and power plant operations used in the generation of electricity to meet the Company's South Carolina retail customer requirements during the review period. The review period includes actual data for March 2011 through February 2012, estimated data for March 2012 through June 2012, and forecasted data for July 2012 through June 2013.

Q. WHAT AREAS WERE ENCOMPASSED IN YOUR REVIEW OF THE COMPANY'S FUEL EXPENSES?

A. ORS examined various fuel and performance related documents as part of its review. The information reviewed addressed various energy generation and power plant maintenance activities. In preparation for this proceeding, ORS analyzed the Company's monthly fuel reports including power plant performance data, unit outages and generation statistics. ORS evaluated nuclear fuel, coal, natural gas, fuel oil, fuel transportation and purchased power contracts and the reagent related contracts including ammonia and limestone. ORS also evaluated the Company's policies and procedures for fuel procurement. All information was reviewed with reference to the Company's existing Adjustment for Fuel and Variable Environmental Costs Rider and the Fuel Clause statute.

Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF THE COMPANY'S REQUEST IN THIS PROCEEDING?

A. ORS met with Company personnel from various departments including Power System Operations, Regulated Fuels and Transportation, Natural Gas and Oil

1 Procurement, Nuclear Fuel Supply, Nuclear Engineering, and Fuel Forecasting. These
2 meetings occurred at ORS offices as well as the Company's headquarters in Raleigh, NC.
3 Also, ORS reviewed documentation of natural gas purchases for operation of the
4 Company's natural gas fueled generating facilities. In addition, ORS keeps abreast of the
5 nuclear, coal and natural gas industries including transportation through industry
6 publications on a daily basis. During this review period, ORS attended the Nuclear
7 Regulatory Commission post-annual inspection meeting for the H.B. Robinson nuclear
8 generation station.

9 **Q. DID ORS EXAMINE THE COMPANY'S PLANT OPERATIONS FOR THE**
10 **REVIEW PERIOD?**

11 **A.** Yes. ORS reviewed the Company's performance of its generating facilities to
12 determine if the Company made reasonable efforts to minimize fuel costs. ORS also
13 reviewed the availability and capacity factors of the Company's power plants. Exhibit
14 LCF-1 shows – in percentages – the monthly availability factors of the Company's major
15 generating units. The corresponding capacity factors in Exhibit LCF-2 indicate the
16 monthly utilization of each unit in producing power.

17 **Q. PLEASE EXPLAIN THE SIGNIFICANCE OF PLANT AVAILABILITY AND**
18 **HOW IT IS USED IN YOUR EVALUATION OF THE COMPANY'S PLANT**
19 **PERFORMANCE.**

20 **A.** Exhibits LCF-3 and LCF-4 show the Company's major fossil and nuclear units'
21 summary of outages for the review period, respectively. With reference to Exhibit LCF-
22 1, months where generation units show zero availability as well as those months showing
23 less than 100% availability led ORS to examine the reasons for such occurrences.

Exhibits LCF-1 through LCF-4 should be used in concert to evaluate the Company's plant operations. As an example, Exhibit LCF-1 shows Roxboro Unit #2 had 0.0% availability in March 2011. Exhibit LCF-2 shows that the capacity during that same time period was also 0.0%. Exhibit LCF-3, page 1 of 2, indicates the reason for this as being the scheduled Spring outage between February 4, 2011 and June 7, 2011; therefore, the unit was not available to generate electricity during this time frame.

Q. WOULD YOU EXPLAIN HOW THE OTHER OUTAGES ARE REPRESENTED ON EXHIBITS LCF-3 AND LCF-4?

A. Yes. Exhibit LCF-3 provides explanations for major fossil unit outages of 100 hours or greater. While all plant outages were not included in this Exhibit, all outages were reviewed by ORS. Exhibit LCF-4 provides explanations for all nuclear plant outages during the review period.

Q. PLEASE ADDRESS THE OUTAGES AT THE COMPANY'S THREE NUCLEAR STATIONS.

A. Exhibit LCF-4 shows the duration, type, and cause of the outages at the Company's nuclear stations. During the review period, there were ten outages, including three scheduled refueling outages. Including these outages, the three nuclear stations, consisting of four units, achieved an overall 89.8% actual availability factor and 91.4% actual capacity factor for the review period.

Q. DID ORS REVIEW THE COMPANY'S GENERATION MIX DURING THE REVIEW PERIOD?

A. Yes. Exhibit LCF-5 shows the megawatt-hour ("MWh") generation mix for the review period by percentage and generation type. As can be determined in this Exhibit,

1 the baseload coal and nuclear plants contributed 77.9% of the generation throughout the
2 review period. Jointly, the combined-cycle and combustion turbine natural gas-fired
3 plants contributed 13.7% of the generation, which is a notable increase as compared to
4 7.8% during the prior review period. This increase in natural gas usage is primarily
5 driven by the lower cost of natural gas. The remainder of the generation was met through
6 a mix of hydro-electric and purchased power.

7 **Q. DID ORS EXAMINE THE COMPANY'S FUEL COSTS ON A PLANT-BY-PLANT BASIS?**

9 **A.** Yes. Exhibit LCF-6 shows the Company's average fuel costs by generating plant
10 on the Company's system for the review period and the MWhs produced by these plants.
11 ORS's review revealed the lowest average fuel cost of 0.616 cents per kilowatt-hour
12 ("kWh") at the Robinson Nuclear Station Unit #2, and the highest average period fuel
13 cost of 5.623 cents per kWh at the now-retired Weatherspoon coal-fired units. The
14 Company utilizes economic dispatch which generally requires that the lower cost units
15 are dispatched first.

16 **Q. HAS ORS REVIEWED THE COMPANY'S HEDGING PRACTICES FOR NATURAL GAS?**

18 **A.** Yes, ORS annually reviews the monthly gains and losses from PEC's natural gas
19 hedging programs. ORS also reviews the Company's policies and procedures on natural
20 gas hedging. During the review period, PEC hedged approximately half of the natural
21 gas purchased.

22 **Q. WHAT WERE THE RESULTS OF PEC'S NATURAL GAS HEDGING PROGRAM DURING THE REVIEW PERIOD?**

1 **A.** Due to decreasing natural gas prices, the hedged portion of the Company's natural gas
2 purchases exceeded market prices during the review period. This resulted in an increase
3 cost of approximately \$8 million for South Carolina retail customers during the review
4 period.

5 **Q. DOES ORS HAVE ANY RECOMMENDATIONS REGARDING THE**
6 **COMPANY'S HEDGING PROGRAMS?**

7 **A.** ORS recommends that the Company continue to monitor and evaluate the
8 effectiveness of its hedging programs and make appropriate adjustments as market
9 conditions change.

10 **Q. HAS ORS REVIEWED THE ACCURACY OF THE COMPANY'S FORECAST?**

11 **A.** Yes. As shown in Exhibit LCF-7, the Company's estimated MWh sales were
12 6.25% higher than the actual sales during the review period. In addition, Exhibit LCF-8
13 shows the monthly variance between estimated and actual fuel cost for the review period.
14 This Exhibit shows the average estimated fuel cost level for the period was 2.89% lower
15 than the average actual fuel costs.

16 **Q. WHAT OTHER REVIEWS HAS ORS UTILIZED IN MAKING ITS**
17 **DETERMINATIONS IN THIS PROCEEDING?**

18 **A.** Exhibit LCF-9 shows the actual ending balances of over and under-collections of
19 base fuel costs beginning December 1979. The Company has experienced over-recovery
20 and under-recovery balances since December 1979. As of February 2012, the Company
21 recorded a cumulative over-recovery of \$5,559,522.

22 **Q. WHAT OTHER SOURCES DOES ORS USE IN DETERMINING THE**
23 **REASONABLENESS OF THE COMPANY'S REQUEST?**

1 **A.** ORS routinely 1) reviews private and public industry publications as well as those
2 available on the Energy Information Administration's ("EIA") website; 2) conducts
3 meetings with Company personnel; 3) attends industry conferences; and 4) reviews fuel
4 information as filed monthly by electric generating utilities with the Federal Government.
5 An example of EIA data reviewed is included on Exhibit LCF-10. Exhibit LCF-10
6 provides historical uranium price data and shows a significant increase in the price of
7 uranium since 2006.

8 **Q. DID THE COMPANY AND ORS MAKE ANY ADJUSTMENTS DURING THE**
9 **ACTUAL REVIEW PERIOD THAT WERE REVIEWED BY THE ORS**
10 **ELECTRIC DEPARTMENT?**

11 **A.** Yes. The Company made an over-recovery adjustment in September 2011 of \$10
12 million to the Deferred Fuel Account. This adjustment was reviewed and accepted by the
13 ORS Electric Department.

14 In February 2012, ORS made an over-recovery adjustment of \$1,230,519 to
15 recognize an additional dollar amount for replacement power due to a forced outage of
16 the Brunswick Nuclear Plant. This adjustment was provided to the ORS Audit
17 Department by the ORS Electric Department.

18 **Q. WHAT IMPACT WILL THE COMPANY'S PROPOSED DECREASE HAVE ON**
19 **A RESIDENTIAL CUSTOMER'S BILL?**

20 **A.** The proposed base fuel factor with ORS adjustments is 2.688 cents/kWh
21 compared to the Company's proposed base fuel factor of 2.707 cents/kWh. Combined
22 with the environmental factor, the total fuel factor proposed by ORS would decrease the

1 average monthly bill for a residential customer using 1000 kWh from \$103.85 to
2 approximately \$100.13. This equates to a decrease of approximately \$3.72 or 3.58%

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A.** Yes, it does.

Office of Regulatory Staff
Power Plant Performance Data Report
Availability Factors (Percentage) for
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

Plant	Unit	MW Rating	Historical Data			Review Period (Actual) Data												Average Review Pd.
			2009	2010	2011	Mar 2011	Apr 2011	May 2011	June 2011	July 2011	Aug 2011	Sept 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	
Brunswick	1 ¹	938	95.9	81.3	97.9	100.0	100.0	83.8	100.0	98.2	97.0	100.0	100.0	99.0	97.5	99.9	75.6	95.9
Brunswick	2 ¹	920	78.0	97.4	77.4	11.7	34.2	100.0	95.9	99.7	98.1	93.3	96.2	11.9	87.9	100.0	96.6	77.1
Harris	1 ²	900	91.6	87.5	99.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	100.0	100.0	100.0
Robinson	2	724	98.6	55.2	98.4	99.9	100.0	100.0	100.0	95.6	100.0	86.5	98.9	100.0	100.0	54.8	0.0	86.3
Nuclear Total		3482	91.0	80.3	93.4	77.9	83.5	96.0	99.0	98.4	98.8	95.0	98.8	77.7	96.3	88.7	68.1	89.8
Asheville	1	191	96.7	91.9	93.8	99.0	71.2	73.7	94.6	99.9	99.2	99.3	99.4	100.0	89.9	1.5	60.2	82.3
Asheville	2	185	96.3	91.2	87.9	98.4	87.3	99.6	98.8	97.7	97.5	29.8	50.7	98.6	99.1	98.3	97.4	87.7
Mayo	1 ²	727	88.3	94.7	90.7	95.3	85.2	88.9	93.6	94.4	100.0	100.0	45.7	96.8	91.6	100.0	89.6	90.1
Roxboro	1	364	94.6	90.2	73.4	94.2	89.8	68.6	92.3	89.3	94.8	93.0	52.6	23.8	0.0	62.8	91.1	71.0
Roxboro	2	662	86.2	73.9	63.0	0.0	0.0	0.0	72.0	93.3	94.5	94.2	100.0	100.0	99.3	99.6	99.4	71.0
Roxboro	3	693	92.2	97.9	91.6	79.4	97.5	99.8	99.6	100.0	99.5	100.0	75.3	55.1	100.0	98.4	95.9	91.7
Roxboro	4 ³	698	93.6	93.2	99.3	99.9	100.0	99.7	96.6	99.9	100.0	96.7	99.8	100.0	99.5	95.0	99.2	98.8
Coal Total		3520	92.6	90.4	85.7	80.9	75.8	75.7	92.5	96.3	97.9	87.6	74.8	82.0	82.8	79.4	90.4	84.7
Richmond	7	151	84.9	90.6	82.9	100.0	50.2	96.1	97.7	100.0	91.0	100.0	100.0	89.8	81.0	100.0	100.0	92.1
Richmond	8	151	84.6	88.8	89.7	100.0	50.2	96.1	91.6	94.6	98.8	100.0	90.3	69.1	85.2	82.0	94.0	87.7
Richmond	9	168	85.2	91.0	94.4	100.0	50.2	96.1	100.0	100.0	99.0	100.0	100.0	100.0	87.1	100.0	100.0	94.4
Richmond	13 ⁴	200	n/a	n/a	95.3	n/a	n/a	n/a	98.4	97.8	100.0	99.3	100.0	71.4	100.0	45.7	99.7	90.3
Richmond	14 ⁴	200	n/a	n/a	94.4	n/a	n/a	n/a	94.3	100.0	95.2	100.0	100.0	71.4	100.0	86.4	100.0	94.2
Richmond	15 ⁴	252	n/a	n/a	93.5	n/a	n/a	n/a	98.0	100.0	100.0	99.3	100.0	56.9	100.0	100.0	100.0	94.9
CC Total ⁵		1122	84.9	90.1	91.7	100.0	50.2	96.1	96.7	98.7	97.3	99.8	98.4	76.4	92.2	85.7	98.9	92.2

¹ North Carolina Eastern Municipal Power Agency No. 1 (18.33%) and Progress Energy Carolinas (81.67%)

² North Carolina Eastern Municipal Power Agency No. 1 (16.17%) and Progress Energy Carolinas (83.83%)

³ North Carolina Eastern Municipal Power Agency No. 1 (12.94%) and Progress Energy Carolinas (87.06%)

⁴ Richmond Units 13, 14 & 15 began commercial operations on June 1, 2011

⁵ CC designates Combined-Cycle units

Office of Regulatory Staff
Power Plant Performance Data Report
Capacity Factors (Percentage) for
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

Plant	Unit	MW Rating	Historical Data				Review Period (Actual) Data												Average Review Pd.
			Life ¹ Time	2009	2010	2011	Mar 2011	Apr 2011	May 2011	June 2011	July 2011	Aug 2011	Sept 2011	Oct 2011	Nov 2011	Dec 2011	Jan 2012	Feb 2012	
Brunswick	1	938	73.2	97.6	82.9	100.2	103.1	102.7	85.2	101.2	98.9	98.0	101.5	102.7	102.2	100.3	101.3	69.2	97.2
Brunswick	2	920	70.4	79.5	99.1	78.6	11.3	31.8	102.6	97.4	101.4	99.3	94.6	99.0	11.3	90.6	102.0	98.5	78.3
Harris	1	900	87.5	93.9	89.9	102.9	104.3	103.2	102.4	101.5	101.1	101.4	102.1	103.6	104.0	104.2	104.6	104.5	103.1
Robinson	2	724	76.9	104.1	56.9	100.4	104.1	102.7	101.3	99.4	94.5	95.4	85.9	102.3	103.9	104.5	52.1	0.0	87.2
Nuclear Total		3482	77.0	91.9	93.6	91.9	79.4	84.1	97.6	99.9	99.2	98.7	96.6	101.9	79.0	99.6	92.1	71.7	91.4
Asheville	1	191	n/a	70.9	73.7	54.7	55.5	36.7	40.6	56.0	65.4	62.0	56.2	42.6	51.3	42.5	0.0	38.0	45.6
Asheville	2	185	n/a	59.4	69.5	49.0	49.0	35.9	56.4	59.1	61.9	59.0	16.8	22.9	46.9	43.6	59.1	60.8	47.6
Mayo	1	727	n/a	62.4	76.6	55.4	58.5	61.6	43.0	66.9	73.1	69.4	52.7	0.0	42.3	50.6	71.6	69.8	55.0
Roxboro	1	364	n/a	79.4	82.6	54.7	79.5	77.3	50.0	67.7	70.3	76.4	60.3	17.9	14.3	0.0	44.7	66.6	52.1
Roxboro	2	662	n/a	73.6	67.0	44.4	0.0	0.0	0.0	43.5	71.7	64.4	64.1	64.2	69.1	61.7	70.2	76.4	48.8
Roxboro	3	693	n/a	62.8	80.2	59.0	51.4	63.0	66.3	72.2	74.0	68.6	51.5	23.7	31.1	49.6	60.2	65.1	56.4
Roxboro	4	698	n/a	71.3	72.8	62.2	63.6	64.6	70.2	65.8	68.4	65.6	49.2	52.1	59.6	44.1	57.1	67.6	60.7
Coal Total		3520	n/a	54.6	52.9	54.6	48.6	49.8	46.2	62.4	70.8	67.3	53.0	32.4	46.4	45.2	58.9	67.1	52.3
Richmond	7	151	n/a	58.6	71.0	65.9	86.6	40.4	77.4	83.4	84.6	75.0	76.3	70.6	73.8	61.4	85.7	88.4	75.3
Richmond	8	151	n/a	55.8	69.6	68.8	85.3	36.9	76.4	79.5	85.8	77.5	77.4	52.2	58.9	68.4	65.5	82.2	70.5
Richmond	9	168	n/a	58.6	76.2	72.9	97.5	45.2	79.0	84.5	88.7	79.1	77.7	70.6	74.4	71.3	81.0	95.7	78.7
Richmond	13 ²	200	n/a	n/a	n/a	71.4	n/a	n/a	n/a	84.7	88.4	82.8	71.0	50.0	44.7	77.9	34.2	82.9	68.5
Richmond	14 ²	200	n/a	n/a	n/a	73.8	n/a	n/a	n/a	84.8	91.0	82.6	77.0	54.8	45.5	80.8	69.1	83.6	74.3
Richmond	15 ²	252	n/a	n/a	n/a	72.3	n/a	n/a	n/a	79.5	85.6	78.0	67.8	57.0	49.2	88.7	57.9	96.0	73.3
CC Total³		1122	n/a	39.5	57.7	39.5	90.1	41.0	77.7	82.6	87.4	79.4	73.9	58.6	56.1	76.3	63.9	88.5	73.4

¹ The lifetime nuclear unit capacity factors are through February 2012

² Richmond Units 13, 14 & 15 began commercial operations on June 1, 2011

³ CC designates Combined-Cycle units

Office of Regulatory Staff
Fossil Unit Outage Report - 100 Hrs or Greater Duration
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

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Unit	Date Offline	Date Online	Hours	Outage Type	Explanation of Outage
Asheville #1	4/23/11	5/6/11	320.67	Planned	Unit was taken offline for scheduled Spring Outage.
Asheville #1	12/31/11	1/5/12	110.58	Forced	Unit was forced offline due to excessive turbine vibration.
Asheville #1	1/8/12	2/12/12	819.28	Maintenance	Unit was taken offline for turbine repairs due to vibration.
Asheville #2	9/9/11	10/13/11	816.25	Planned	Unit was taken offline for scheduled Fall Outage.
Mayo #1	10/14/11	10/31/11	385.50	Planned	Unit was taken offline for scheduled Fall Outage.
Roxboro #1	4/29/11	5/9/11	257.90	Planned	Unit was taken offline for scheduled Spring Outage.
Roxboro #1	10/7/11	10/12/11	129.40	Maintenance	Unit was taken offline to repair tube leaks
Roxboro #1	10/26/11	11/11/11	390.13	Planned	Unit was taken offline for scheduled Fall Outage.
Roxboro #1	11/29/11	1/10/12	988.00	Planned	Unit was taken offline to replace condenser tubes.
Roxboro #2	2/4/2011 ¹	6/7/11	2,933.28	Planned	Unit was taken offline for scheduled Spring Outage including plant re-tubing.
Roxboro #3	3/25/11	3/30/11	102.67	Planned	Unit was taken offline for scheduled Spring Outage.
Roxboro #3	10/24/11	11/14/11	507.53	Planned	Unit was taken offline for scheduled Fall Outage.

¹ Roxboro 2 began this outage prior to the review period.

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Fossil Unit Outage Report - 100 Hrs or Greater Duration
Progress Energy Carolinas, Inc.
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Unit	Date Offline	Date Online	Hours	Outage Type	Explanation of Outage
Richmond #7	4/16/11	5/2/11	387.43	Planned	Unit was taken offline for scheduled Spring Outage.
Richmond #7	11/27/11	12/2/11	119.12	Planned	Unit was taken offline for scheduled Fall Outage.
Richmond #8	4/16/11	5/2/11	387.43	Planned	Unit was taken offline for scheduled Spring Outage.
Richmond #8	10/28/11	11/10/11	295.37	Planned	Unit was taken offline for scheduled Fall Outage.
Richmond #8	1/26/12	2/2/12	175.77	Maintenance	Unit was taken offline due to fouling in the cooling tower.
Richmond #9	4/16/11	5/2/11	387.55	Planned	Unit was taken offline for scheduled Spring Outage.
Richmond #13	11/12/11	11/20/11	206.08	Planned	Unit was taken offline for scheduled Fall Outage.
Richmond #13	1/6/12	1/22/12	388.63	Maintenance	Unit was taken offline to repair compressor blades
Richmond #14	11/12/11	11/20/11	206.08	Planned	Unit was taken offline for scheduled Fall Outage.
Richmond #15	11/12/11	11/25/11	310.90	Planned	Unit was taken offline for scheduled Fall Outage.

Office of Regulatory Staff
Nuclear Unit Outage Report
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

REVISED
EXHIBIT LCF-4

Unit	Date Offline	Date Online	Hours	Outage Type	Explanation of Outage
Brunswick #1	5/14/11	5/18/11	96.10	Maintenance	Unit was taken offline to repair drywell leaks.
Brunswick #1	2/22/12	2/28/12	124.68	Forced	Unit was forced offline due to high differential pressure in the circulating water intake pumps.
Brunswick #1	2/28/12	2/29/12 ¹	44.00	Planned	Unit was taken offline for scheduled refueling outage.
Brunswick #2	3/4/11	4/16/11	1,014.22	Planned	Unit was taken offline for scheduled refueling.
Brunswick #2	4/17/11	4/21/11	84.83	Forced	Unit was forced offline due to a leak in the bottom head drain line.
Brunswick #2	11/4/11	11/15/11	252.88	Planned	Unit was taken offline to repair defective fuel bundle.
Brunswick #2	11/15/11	12/2/11	411.50	Forced	Unit was forced offline due to leakage in the drywell.
Robinson #2	9/26/11	9/29/11	82.70	Forced	Unit was forced offline due to failed relay.
Robinson #2	1/18/12	1/21/12	71.55	Forced	Unit was forced offline due to inoperable Station Battery "B".
Robinson #2	1/21/12	2/29/12 ²	960.00	Planned	Unit was taken offline for scheduled refueling outage.

¹ Brunswick 1 completed this outage after the review period.

² Robinson 2 completed this outage after the review period.

Office of Regulatory Staff
Generation Mix: March 2011 – February 2012
Progress Energy Carolinas, LLC
Docket No. 2012-1-E

Month	Percentage ¹					
	Coal	Nuclear	Combined Cycle	Combustion Turbine	Hydro	Purchased Power
<u>2011</u>						
March	38.9	42.6	7.5	1.3	2.3	7.4
April	36.7	48.0	4.1	3.0	2.4	5.8
May	28.5	50.4	9.2	4.1	1.4	6.4
June	36.2	41.5	10.7	3.8	0.9	6.9
July	36.6	39.0	10.7	4.7	0.6	8.3
August	36.3	40.8	10.2	4.1	0.5	8.2
September	31.5	46.5	11.1	2.2	0.6	8.1
October	22.5	58.7	12.0	1.0	0.6	5.2
November	31.6	42.9	10.9	4.4	1.1	9.2
December	25.6	50.1	13.6	1.2	2.2	7.3
<u>2012</u>						
January	33.4	44.3	10.9	2.8	2.0	6.7
February	36.8	35.3	15.4	5.4	1.3	5.9
AVERAGE	32.9	45.0	10.5	3.2	1.3	7.1

¹ Numbers may not equal 100% due to rounding

Office of Regulatory Staff
Generation Statistics for Plants
March 2011 - February 2012
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

REVISED
EXHIBIT LCF-6

Plant	Fuel Type	Average Fuel Cost ¹ (Cents/kWh)	Generation (MWh)
Robinson #2	Nuclear	0.616	5,565,536
Brunswick	Nuclear	0.624	11,736,724
Harris	Nuclear	0.689	6,830,720
Roxboro	Coal	3.820	11,232,045
Richmond CC	Natural Gas	3.923	6,662,153
Cape Fear	Coal	3.938	974,874
Lee	Coal	4.022	1,093,408
Mayo	Coal	4.036	2,948,852
Asheville	Coal	4.277	1,552,025
Robinson #1	Coal	4.902	406,482
Sutton	Coal	5.314	1,430,497
Weatherspoon²	Coal	5.623	133,869

¹ The average fuel costs for coal-fired plants includes oil used for start-up and flame stabilization.

² The Weatherspoon coal plant was retired October 1, 2011.

Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Energy Sales
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

		2011										2012		Period Total
		Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	
[1]	Estimated Sales (MWH)	494,507	487,977	496,178	563,598	609,967	644,469	586,812	516,461	471,216	526,346	597,603	532,501	6,527,635
[2]	Actual Sales (MWH)	437,673	460,798	498,654	555,313	585,770	637,618	516,595	518,258	446,483	440,799	553,900	491,934	6,143,795
[3]	Difference [1]-[2]	56,834	27,179	-2,476	8,285	24,197	6,851	70,217	-1,797	24,733	85,547	43,703	40,567	383,840
[4]	Percent Difference [3]/[2]	12.99%	5.90%	-0.50%	1.49%	4.13%	1.07%	13.59%	-0.35%	5.54%	19.41%	7.89%	8.25%	6.25%

Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Fuel Cost
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

	2011					2012							
	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Period Average
[1] Original Projection (¢/kWh)	2.741	2.402	2.668	3.020	3.186	3.013	2.571	2.507	2.455	2.797	2.803	3.045	2.767
[2] Actual Experience (¢/kWh)	2.725	2.728	3.057	3.113	3.401	2.996	2.662	2.283	2.957	2.595	2.791	2.889	2.850
[3] Amount in Base (¢/kWh)	2.723	2.723	2.723	2.723	3.041	3.041	3.041	3.041	3.041	3.041	3.041	3.041	2.935
[4] Variance from Actual [1-2]/[2]	0.59%	-11.95%	-12.72%	-2.99%	-6.32%	0.57%	-3.42%	9.81%	-16.98%	7.78%	0.43%	5.40%	-2.89%

Office of Regulatory Staff
History of Cumulative Recovery Account Report
Progress Energy Carolinas, Inc.
Docket No. 2012-1-E

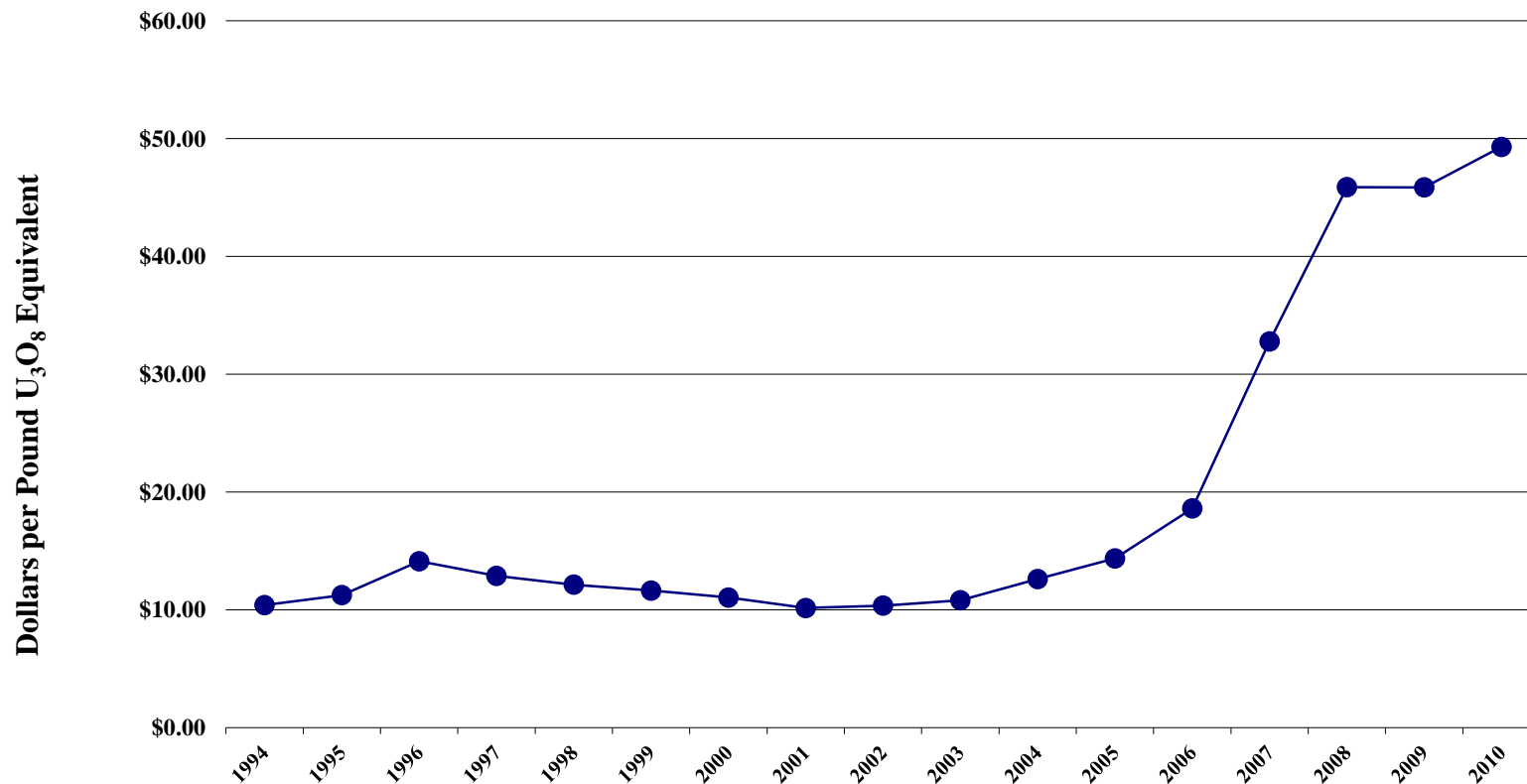
REVISED
EXHIBIT LCF-9

PERIOD	OVER (UNDER)
December-79	\$ 1,104,730
September-80	\$ (12,000,131)
March-81	\$ (4,060,364)
August-81	\$ (12,113,832)
March-82	\$ (935,412)
September-82	\$ (6,881,796)
March-83	\$ (2,259,114)
September-83	\$ (3,264,694)
March-84	\$ 109,270
September-84	\$ 2,172,859
March-85	\$ (2,317,008)
September-85	\$ 745,913
March-86	\$ 1,972,280
September-86	\$ (696,805)
March-87	\$ 2,408,354
September-87	\$ 3,310,059
March-88	\$ (3,964,888)
September-88	\$ (5,737,541)
March-89	\$ (8,125,496)
September-89	\$ (5,875,641)
March-90	\$ (9,311,149)
September-90	\$ (658,614)
March-91	\$ 1,403,023
September-91	\$ 4,661,988
March-92	\$ 5,201,112
September-92	\$ (6,712,920)
March-93	\$ (9,563,180)
September-93	\$ - ¹
March-94	\$ (1,010,684)
September-94	\$ 1,975,939
March-95	\$ 7,408,161
September-95	\$ 2,011,489
December-96	\$ 186,139
December-97	\$ (6,212,396)
December-98	\$ (14,334,022)
December-99	\$ (17,967,157) ²
December-00	\$ (18,627,471)
December-01	\$ (9,906,921)
December-02	\$ (7,393,266)
December-03	\$ (6,038,891)
March-05	\$ (27,537,237)
March-06	\$ (32,368,520)
March-07	\$ (22,834,137)
February-08	\$ (14,452,319)
February-09	\$ (9,966,147)
February-10	\$ (3,413,120)
February-11	\$ (10,418,111)
February-12	\$ 5,559,522

¹ Eliminated \$14,011,263 per Commission Order No. 1993-865

² Reduced by \$6,500,000 per Commission Order No. 1999-324

**EIA Weighted-Average Price of Uranium Purchased by
Owners and Operators of U.S. Civilian Nuclear Power Reactors**
1994-2010 Deliveries



Sources: U.S. Energy Information Administration: 1994-2002-Uranium Industry Annual reports. 2003-2010-Form EIA-858, "Uranium Marketing Annual Survey".

Office of Regulatory Staff
Calculation of Base Fuel Component
Progress Energy Carolinas, Inc.
Docket No. 2012-2-E

REVISED
EXHIBIT LCF-11

Projected Fuel Expense from July 2012 through June 2013	
Cost of Fuel	\$1,518,821,114
System Sales (MWh)	54,285,666
Average Cost (cents/kWh)	2.798
Revenue Difference To be Collected from July 2012 through June 2013	
(Over)/Under-Recovery at June 30, 2012	(\$7,027,446)
Projected S.C. Retail Sales (MWh)	6,391,904
Average Cost (cents/kWh)	(0.110)
Base Fuel Cost Per kWh - Projected Period	
Average Fuel Cost (cents/kWh)	2.798
Revenue Difference (cents/kWh)	(0.110)
<i>Base Fuel Component (cents/kWh)</i>	2.688